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ROUTING AND RECORD SHEET

INSTRUCTIONS: Officer designations should be used in the "TO" column. Under each comment a line should be drawn across sheet and each comment numbered to correspond with the number in the "TO" column. Each officer should initial (check mark insufficient) before further routing. This Routing and Record Sheet should be returned to Registry.

FROM:	TELEPHONE	NO.
OC-E/R&D-EP		
		DATE
		17 February 1956

TO	ROOM NO.	DATE		OFFICER'S INITIALS	TELEPHONE	COMMENTS
		REC'D	FWD'D			
1. R&D Lab		2-28	2-28	Alt		Note parallel approach on video amplifier program Alt
2.		2-29	2-29	My		
3.		2-29		CR		
4.		2-29	2-29	B.		
5. File						25X1
6.						
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The Files

17 February 1956

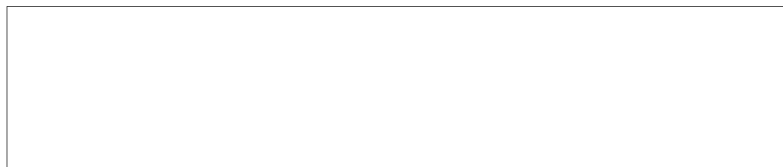


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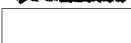

Contract RD-915A, Marine Crystal Video, Trip and Progress Report.

1. On 31 January and 1 February the writer visited the  plant to determine the status of the subject contract. Those present were:

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2. The ELINT Activities Branch of EPD has indicated an urgent need for transistor video amplifiers similar to a type being developed under the terms of this contract. In an effort to determine how these units might be obtained on a priority basis from  the writer explored various means of procurement. In discussions with the  people, it was decided that fabrication of the spare units will be started immediately so that these items may be forwarded to us in the form of advance shipment of spare parts. This will make possible an immediate delivery of 18 pre-amplifiers of 750 kc bandwidth type. The contract is to be amended to allow for additional units to be furnished with the basic system. Additional antennas in the L, S, and X bands are also going to be procured under a similar setup. The contract will also be amended to allow for more antenna spares. This is noted in Paragraphs 4 and 5 of the attachment.

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3. Two complete channels of a representative band have been fabricated. This includes all circuit functions from the crystal preceeding the pre-amplifier through all amplifiers to the plates of the cathode ray tube. The operation of this was demonstrated to the writer, who was allowed to conduct certain tests on it. The operation of this unit appears to be very satisfactory. As the relative level signal in each channel was changed, it was noted that the azimuth indication on the oscilloscope changed accordingly. It was noted, however, that for extremely short pulses on a very low repetition rate, there was an error in apparent azimuth of about 10 degrees. This, however, is an impossible condition which does not exist in practice. For all normal pulse widths and repetition rates, the azimuth indications are reasonably accurate.

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4. The method of calibration of each channel within each band was discussed and the manner in which it is to be accomplished. In all previous discussions the writer had based most thoughts upon the fact that certain of the balance controls would be accessible from the front panel. It was, therefore, with considerable surprise that it was learned that all balance controls are contained within the internal chassis. It is therefore necessary to remove one of the oscilloscope sub-assemblies from the console in order to make any adjustments. The button which controls the calibrator itself is located on the front panel, while the balance controls are located on the side of the chassis, approximately half-way back. In order to make this adjustment, it is necessary to loosen the four captive screws holding the sub-assembly within the console, completely remove the unit from the console, and connect it to the plug by means of an adaptor cable. In this position, it will then be possible to actuate the calibrator and perform the necessary adjustments to the calibration potentiometers. The writer questioned the advisability of this, and suggested that a more suitable location for these adjustments would be on the front panel of the unit. Note Paragraph 10 of the attachment. The project engineer, [] was rather adamant in his position in stating that the design work had been completed and it would be impossible to make any changes, as there was no space available. The writer does not consider that a breadboard layout and an engineering sketch is sufficient proof to support a statement of a fixed layout. [] was unable to furnish further evidence. Therefore, the writer took the position that [] is to investigate the possibility of moving certain of the balance controls to the front panels so that they may be accessible at times when they may be needed.

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5. The question of shutters for the antenna was discussed. [] has investigated the various electro-mechanical solenoids and other relays which may be used to operate crystal shutters in the high-band antennas and has found that the power required to operate these units far exceeds the total requirements of the entire system in the other electronic circuitry. Therefore, they have requested permission to investigate mechanical means of closing a shutter. This could be accomplished in several ways, but chiefly by the use of a flexible cable. The writer took the position that such a means would be feasible only if a single movement of a single control would operate all shutters, electrical and mechanical. Please note Paragraph 16 of the attachment.

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6. In general, the progress of this contract has been satisfactory, both at [] Certain delays have been encountered, of which the most serious was the difficulty in getting the present amendment to the contract for the calibration and filter system. This amendment is dated 1 February 1956. However,

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in checking with [] on 10 February, the paper had not yet reached them. It is believed that [] will have the authorization to proceed work during the week of 13 February. In other respects, the writer has felt certain dissatisfaction with the progress. This has been noticed in two particular directions. The first is a lack of overall organization, although independent groups operating on the various problems have done excellent jobs of solving their particular phase of the work.

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7. This was most noticeable during the period that the Section Engineer, [] was handling this project. More recently, [] has taken over the overall direction of this project. It was noted that a much better organizational setup was accomplished under []. It was since learned that [] has left the [] organization. It is believed, and hoped, that the program will stabilize as soon as [] can become more fully aware of all of the problems. The second point of dissatisfaction concerns the project engineer, []. The writer does not question [] engineering capabilities; however, he appears to have little imagination and appears to be rather stereotyped in his thinking and his approach to problems. The writer has on many occasions found it extremely difficult to have certain problems considered. This is not made easier by the fact that many of the situations must, by necessity, be clothed in security regulations, in which the writer is unable to reveal the reason and necessity for certain approaches. The writer, however, does not consider a lack of total knowledge of a problem as reason to refuse consideration of that problem. This dissatisfaction with the project has been brought unofficially to the attention of the [] through discussions the writer has held with [] the local representative. It may be noted that [] generally agrees with the writer in his observations.

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Attachment:

[] Minutes of Meeting of 1 February 1956.

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OC-E/R&D-EP/FCS:mmb (17 February 1956)

CC: Monthly Report (2)
 R&D Subject File
 E&D-IP
 OC-G&T
 OC-SP/EA
 Dev-ep

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